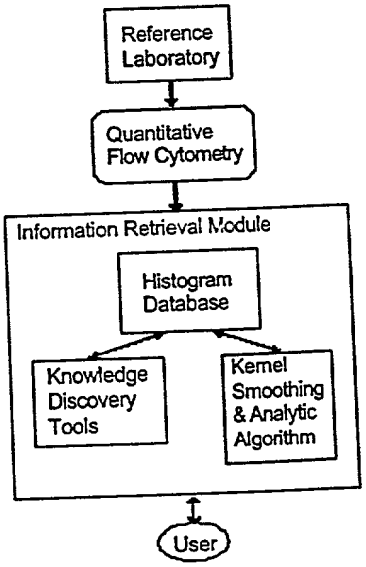
Reference Laboratory
Quantitative Flow Cytometry
Information Retrieval Module
Histogram Database
Knowledge Discovery Tools
Kernel Smoothing & Analytic Algorithm
User

FIGURE 1

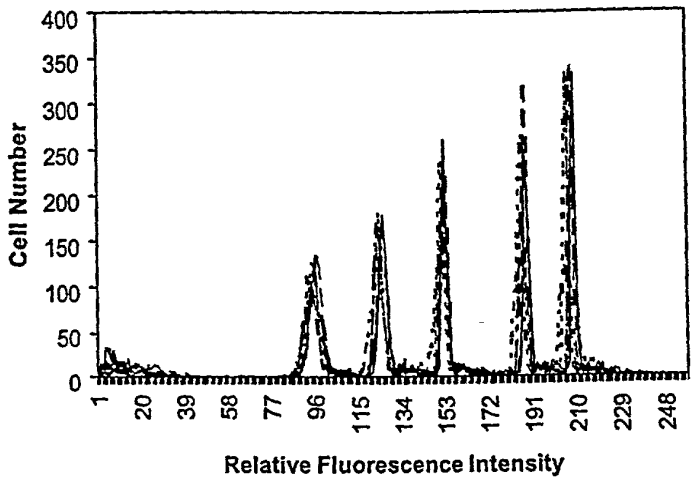
Cell Number
400
350
300
250
200
150
100
50
0
1
20
39
58
77
96
115
134
153
172
191
210
229
248
Relative Fluorescence Intensity

FIGURE 2

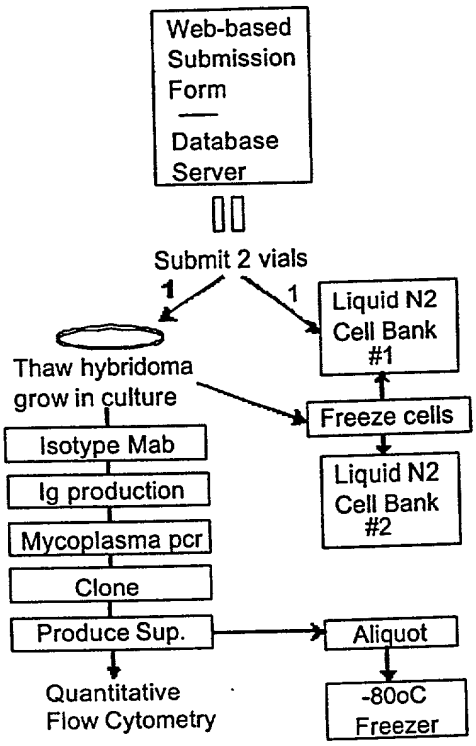

FIGURE 3

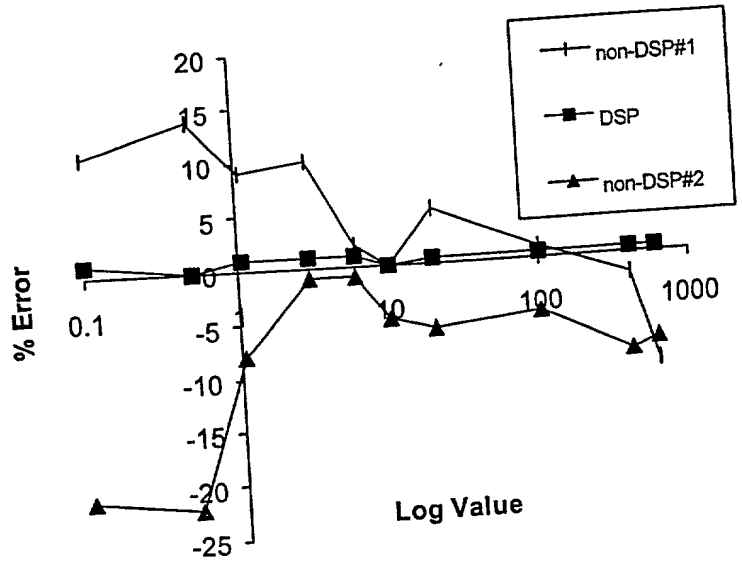

FIGURE 4

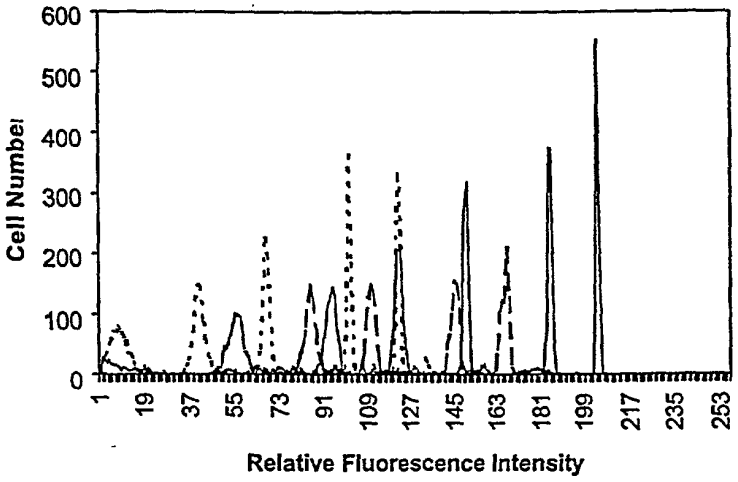

FIGURE 5

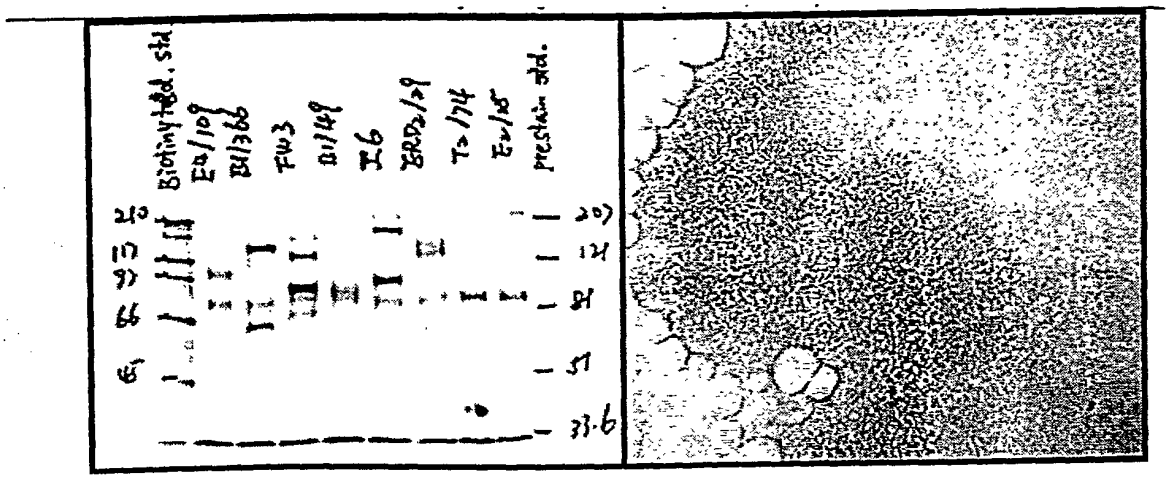

FIGURE 6

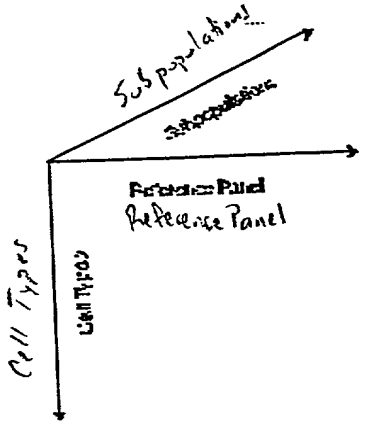

FIGURE 7

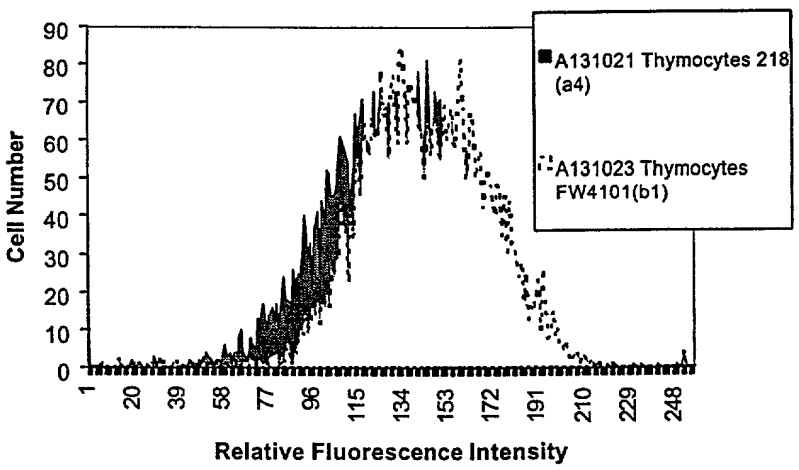

FIGURE 8

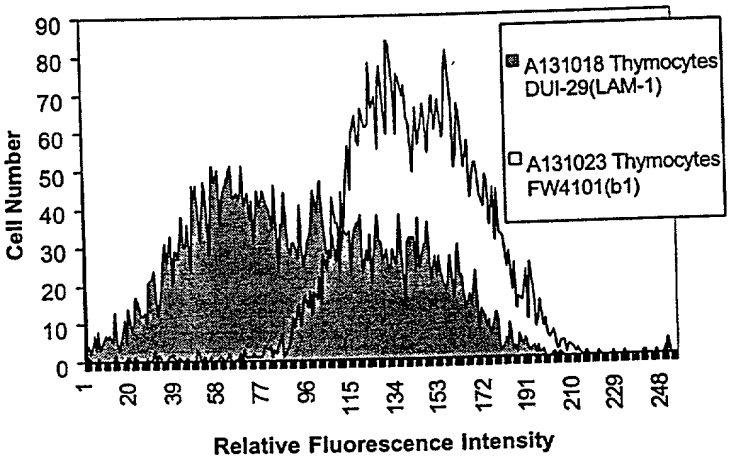

FIGURE 9

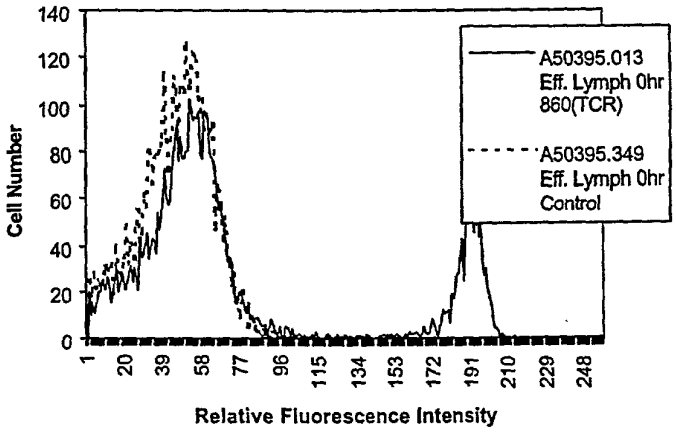

FIGURE 10

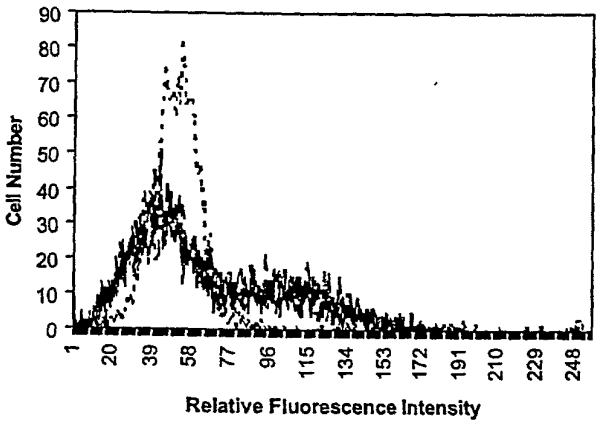

FIGURE 11

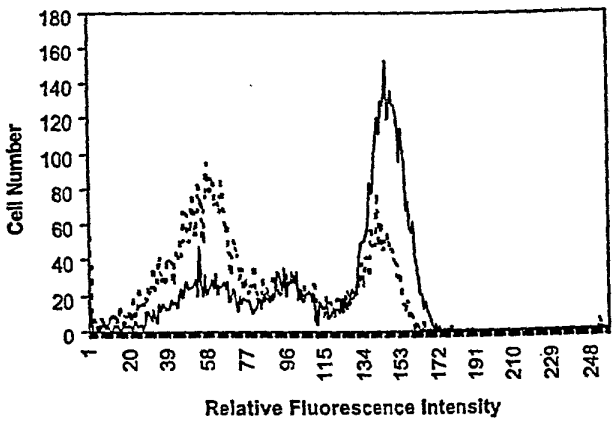

FIGURE 12

	Molecular subunits	Histogram matching
Cell type 1	α1β1	Identical
Cell type 2	α1β1	Identical
Cell type 3	α2β1	Discordant

FIGURE 13

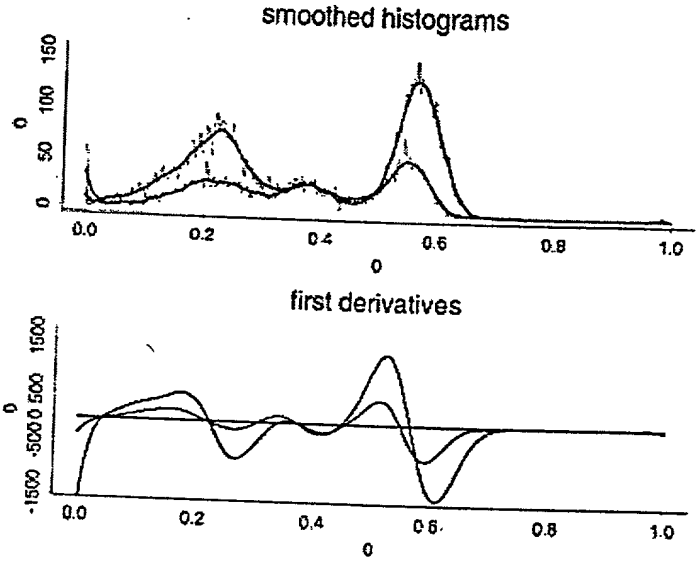
smoothed histograms
0
50
100
150
0.0
0.2
0.4
0.6
0.8
1.0
0
first derivatives
-1500
-500
0
500
1500
0.0
0.2
0.4
0.6
0.8
1.0
0

FIGURE 14

$$\overline{\frac{1}{nh}\sum_{i=1}^{n} K\left(\frac{x_i - x}{h}\right)}$$

FIGURE 15

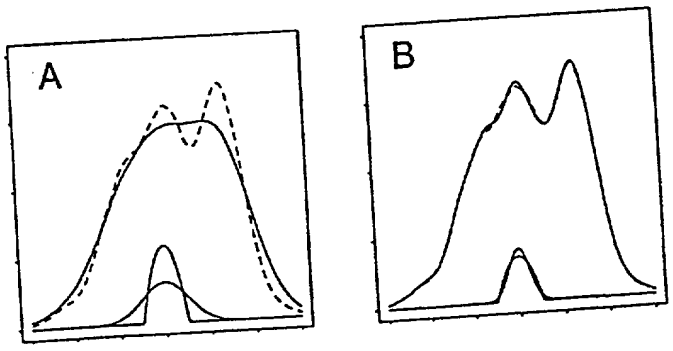

FIGURE 16

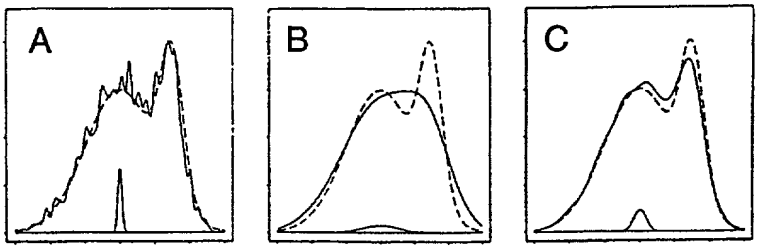

FIGURE 17

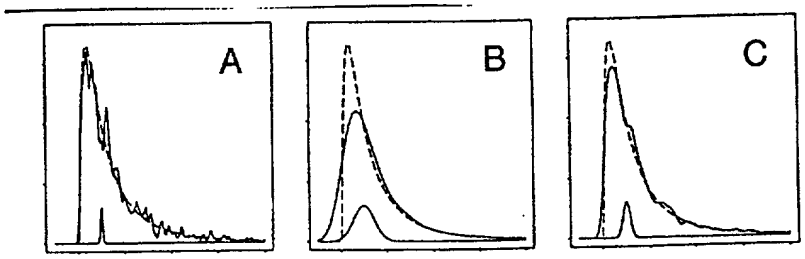

FIGURE 18

$$\frac{1}{nh}\sum_{i=1}^{M} K\left(\frac{g_i - x}{h}\right) c_i \quad (1)$$

FIGURE 19

$$\mathrm{K}'(u) = \frac{d}{du}\mathrm{K}(u)$$

FIGURE 20

$$\frac{-1}{nh^2}\sum_{i=1}^{M}\mathrm{K}\left(\frac{g_i - x}{h}\right)c_i$$

FIGURE 21

$$\frac{1}{nh^3}\sum_{i=1}^{M}\mathrm{K}''\left(\frac{g_i - x}{h}\right)$$

FIGURE 22

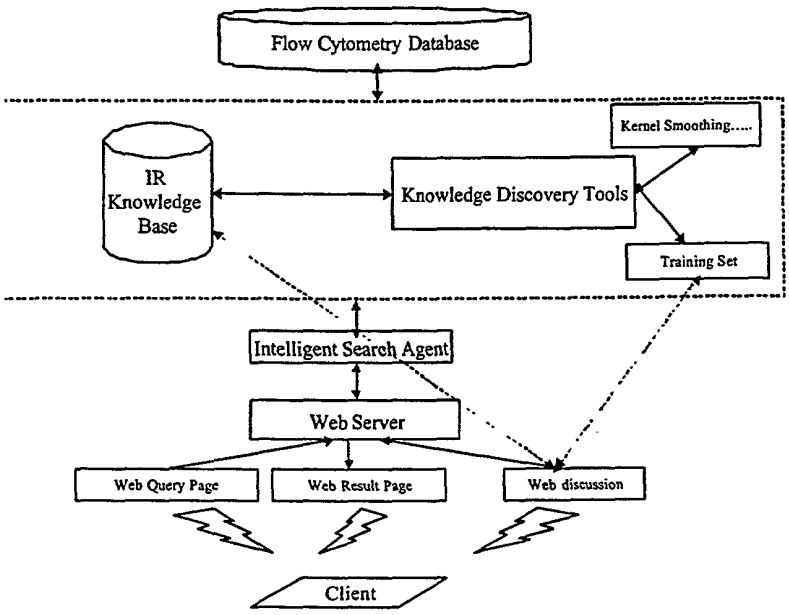

FIGURE 23

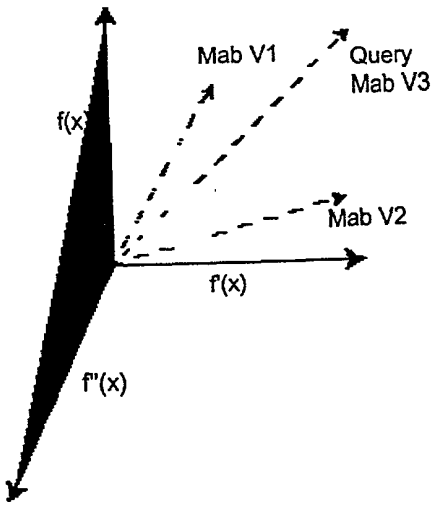

FIGURE 24